CLAIMS

1. A method for defining correction parameters used in transmitter linearization executed by a predistortion method, the method comprising the following steps:

(a) taking a predefined number of samples from a signal coming out of said transmitter,

(b) categorizing the signal samples into classes,

(c) comparing the signal samples with corresponding ideal signal values and

(d) defining a correction parameter for each class on the basis of an average comparison result of all signal samples of the class in question.

2. A method as claimed in claim 1, wherein said categorization in step (b) is performed on the basis of the ideal signal corresponding to the signal sample.

3. A method as claimed in claim 2, wherein said categorization in step (b) is performed on the basis of the amplitude of the ideal signal.

4. A method as claimed in claim 1 or 2, wherein said steps (c) and (d) comprise the following steps for each class:

comparing the normalized amplitude of each signal sample of the class in question to the normalized amplitude of the corresponding signal fed into the transmitter,

defining the ratios of these amplitude values,

calculating the average of the ratios and

defining the correction parameter for the class in question on the basis of the calculated average.

5. A method as claimed in claim 1 or 2, wherein said steps (c) and (d) comprise the following steps for each class:

comparing the normalized amplitude and phase of each signal sample of the class in question with the normalized amplitude and phase of the signal fed into the transmitter and corresponding to the sample respectively,

defining the ratios of the amplitude values and differences of the phase values

calculating the average of the ratios of the amplitude values defined and the average of the phase value differences and

defining the correction parameter for the class in question on the basis of the calculated averages.

6. A method as claimed in claim 1 or 2, wherein said steps (c) and (d) comprise the following steps for each class:

calculating the average of the normalized amplitudes of the signal samples of the class in question and the average of the normalized amplitudes of the signals fed into the transmitter and corresponding to the samples of the class in question,

comparing said amplitude averages,

defining the ratio of the amplitude value averages and

defining the correction parameter for the class in question on the basis of the ratio of the averages defined.

7. A method as claimed in claim 1 or 2, wherein said steps (c) and (d) comprise the following steps for each class:

calculating the average of the normalized amplitudes of the signal samples of the class in question and the average of the normalized amplitudes of the signals fed into the transmitter and corresponding to the samples of the class in question,

calculating the average of the phases of the signal samples of the class in question and the average of the phases of the signals fed into the transmitter and corresponding to the samples of the class in question,

comparing said amplitude averages,

defining the ratio of the amplitude value averages,

comparing said phase averages,

defining the difference of the phase value averages and

defining the correction parameter for the class in question on the basis of the ratio of the amplitude value averages and the difference of the phase value averages defined.

8. A method as claimed in any one of claims 4, 5, 6 or 7, wherein said definition of a correction parameter for a certain class, if the class in question has no signal samples, comprises the following step:

defining as the correction parameter of the class in question the correction parameter of another class, preferably the correction parameter of the closest class, or

defining the correction parameter of the class in question by interpolation from the correction parameters of the closest classes containing samples.

9. A transmitter comprising:

sampling means for sampling the signal coming out of the transmitter,

a predistorter for predistorting the signal to be sent to compensate the nonlinearity of the transmitter,

categorization means for categorizing into classes signal samples taken from the signal coming out of the transmitter,

comparison means for comparing the signal samples with the corresponding ideal signal values, and

definition means, responsive to said comparison means, for defining amplitude and preferably phase correction parameters for each class on the basis of an average comparison result of all signal samples of the class in question, whereby the predistorter is arranged to use said correction parameters when predistorting the signal being transmitted.

10. A transmitter as claimed in claim 9, wherein said definition means are, if it is not possible to define a correction parameter for a class, adapted to take a corresponding correction parameter from another class and to define it as the correction parameter for the required class.

11. A transmitter as claimed in claim 9 or 10, wherein said categorization means are adapted to categorize said sampled signal samples on the basis of the ideal signal value corresponding to each signal sample.